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7-25- 2 ; 2:05PM ;

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978 934 4043;# 3/ 4

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

				•
Alia	U	5	2002	

POWER OF ATTORNEY OR AUTHORIZATION OF AGENT AND **CORRESPONDENCE ADDRESS**

Application Number	09/994,998
Filing Date	November 27, 2001
First Named Inventor	Sukant Tripathy
Group Art Unit	1614
Examiner Name	not assigned
Attorney Docket Number	2328.2003-001

Title

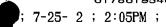
POLYMERIZATION OF AROMATIC MONOMERS USING DERIVATIVES OF HEMATIN

I/We i	nereby appoint
[X]	the attorneys/agents associated with Customer No. 021005
[]	Practitioner(s) named below:
	
	our attorneys/agents to prosecute the application identified above, and to transact all business in the United Patent and Trademark Office connected therewith.
The c	prrespondence address for the above-identified application is:
[X]	Customer Number 021005
	Hamilton, Brook, Smith & Reynolds, P.C.
1	530 Virginia Road
	P.O. Box 9133
	Concord, Massachusetts 01742-9133
[]	Other
Please	e direct all telephono calls and facsimiles to:
Name	N. Scott Pierce Tel. No. 978-341-0036 Fax No. 978-341-0136
4 1	
l am th	
l J	Applicant/Inventor.
[]	Authorized representative of the Assignee of the entire interest. See 37 C.F.R. 3.71. A Statement under 37 C.F.R. §3.73(b) is enclosed.
[X]	Authorized representative of an assignee together with the Government of the United States, as represented by the Secretary of the Army, of the entire interest. A separate Statement under 37 C.F.R. § 3.73(b) is enclosed.
	SIGNATURE of Applicant or Assignee of Record
Name	Louis J. Petrovic, Pb.0
Signati	ure Jouls H Jethoric
Date	1/25/02
[X]	Total of [2] forms are submitted.

6178619540 -> Research Foundation; Page 4

978 934 4043;# 4/ 4

Received: 7/25/02 2:09PM; SENT BY: HBS&R



1978 136→

Docket No. 2328.2003-001

STATEMENT UNDER 37 C.F.R. § 3.73(b)

<u>Kuma</u>	r, Bon-C	heol Ku, and S	oo-Hyoung Lee		
Appli	cation No	o.: <u>09/994,998</u>		Filed: November 27, 2	001
For:_	POLY	MERIZATIO	N OF AROMATIC	MONOMERS USING DERIVATIVES OF HE	MATIN
				,	
	Univer	sity of Massac (Name of Assign	nisetts Lowell	, a university (Type of Assignee, e.g., corporation, partners	ship, university, government agency, etc.)
states	that it is				
A.	[]	the assignee	of the entire right,	, title and interest in the patent application identif	ied above; or
В.	[X]	entire right,		ernment of the United States, as represented by the patent application identified above. A separ	
The ri	ght, title	and interest of	the above-named a	ssignee in the patent application identified above	is established by virtue of:
А. Į Х				he patent application identified above. The assig	
OR					
В. []	A cha	in of title from	the inventor(s) of t	he patent application identified above, to the curr	rent assignee as shown below:
	1.	From:		To:	_
		The docume	nt was recorded in	the Patent and Trademark Office at	
		Reel	, Frame	, or a copy thereof is attached.	
	2.	From:		To:	_
				the Patent and Trademark Office at	
		Reel	, Frame	, or a copy thereof is attached.	
	3.	From:		To;	
		The docume	nt was recorded in	the Patent and Trademark Office at	_
		Reel	, Frame	or a copy thereof is attached.	
	[] A	dditional docu	ments in the chain	of title are listed on a supplemental sheet.	
The ur	dersigne	d (whose title i	s supplied below) i	is authorized to act on behalf of the assignee.	
		1 1			
Date:_	<u></u>	7/25/0	12.		
Name:		/ /	ovic, Ph.D.		
Title:	Director	External Fu	Technology	Transfer & Partnering	



Joint

WHEREAS, I, Lynne A. Samuelson and Ferdinando F. Bruno, along with Sukant Tripathy, Sucharita Roy, Ramaswamy Nagarajan, Jayant Kumar, Bon-Cheol Ku and Soo-Hyoung Lee, have invented a certain improvement in POLYMERIZATION OF AROMATIC MONOMERS USING DERIVATIVES OF HEMATIN, described in an application for Letters Patent of the United States, the specification of which:

[]	is being executed on even date herewith and is about to be filed in the United States Patent Office;
[X]	was filed on November 27, 2001 as Application No. 09/994,998;
[]	was patented under U.S. Patent No. [] on [].

WHEREAS, the Government of the United States, as represented by the Secretary of the Army (hereinafter "ASSIGNEE") desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein; provided that if the Government determines not to cause an application to be filed in any particular foreign country or fails to make such a determination, within the said eight months, all right, title and interest in the invention in such foreign country shall remain in me (us), subject to a nonexclusive, irrevocable, royalty-free license to the Government in any patent which may issue on the invention in such foreign country, including the power to issue sublicenses for use in behalf of the Government and/or furtherance of the foreign policies of the Government;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

	Inventor June A. Samuelson Date May 9, 2002
	Address 21 McDonough Drive, Marlborough MA 01752
Witness Address Witness Address	COUMONWETCH OF MASSACHUSETTS COUNTY OF MIDDLESEX ON THIS 9TH DAY OF MAY, 2002, LYNNE A SAMUELSON PERSONALLY APPEARED BEFORE ME, WHOSE IDENTITY I PROVED ON THE BASIS OF HER MASSACHUSETTS. DRIVERS LIC. TO BE THE SIGNER OF THE ATONE DOCUMENT AND SHE ACKNOWLEDGED THAT SHE SIGNED IT WILLINGLY BRIGHT PUBLIC Commonwealth of Massachusetts
	Commonwealth of Massashuseffs My Commission Expires May 19, 2006

@PFDesktop\::ODMA/MHODMA/iManage;285066;1

TERESA CROUSE
Notary Public
Commonwealth of Massachusetts
My Commission Expires
September 22, 2006

WHEREAS, we, Sukant Tripathy, Sucharita Roy, Ramaswamy Nagarajan, Jayant Kumar, Bon-Cheol Ku and Soo-Hyoung Lee, along with Lynne A. Samuelson and Ferdinando F. Bruno, have invented a certain improvement in POLYMERIZATION OF AROMATIC MONOMERS USING DERIVATIVES OF HEMATIN, described in an application for Letters Patent of the United States, the specification of which:

[]	is being executed on even date herewith and is about to be filed in the United States Patent Office;
[X]	was filed on November 27, 2001 as Application No. 09/994,998;
[]	was patented under U.S. Patent No. [] on [].

WHEREAS, University of Massachusetts Lowell (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having a usual place of business at One University Avenue, Lowell, MA 01854 desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application. together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, inc luding the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature:	Sukant Tripathy (Deceased) Susan Tripathy, as Executrix of the Estate of Sukant Tripathy	- 57
State/Commonwealth	Administratrix	7-18-02
of MA		
County of Mido	llesex	
	d before me the above-named Susan Tripathy and acknowledged that going instrument as his/her free act and deed this day, 20	
(SEAL)	Malles Notary Public	
	Monista bialliotre (print name)	
•	My Commission expires 10/31/08	

Inventor's Signature:
State/Commonwealth Sucharita Roy
of Massachusetts
County of Middlesex
Then personally appeared before me the above-named Sucharita Roy and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this 19th day of July , 20 02. (SEAL) Lila A. Lorrey
Inventor's Signature:
State/Commonwealth Ramaswamy Nagarajan
of <u>Massachusetts</u>
County of Middlesex
Then personally appeared before me the above-named Ramaswamy Nagarajan and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this 28th day of June , 2002. (SEAL) Notary Public (print name) My Commission expires06 / 07 / 2007.

Inventor's Signature:	A Parliage of a
	Jayant Kumar
State/Commonwealth	U
of <u>Massachusetts</u>	;
County of Middlesex	
	d before me the above-named Jayant Kumar and acknowled ged that going instrument as his/her free act and deed this <u>second</u> day $\frac{2002}{1000}$
(SEAL)	Lila A. Lorrey (print name)
	My Commission expires 06 / 07 / 2007.
Inventor's Signature:	
	Bon-Cheol Ku
State/Commonwealth	
of	
	d before me the above-named Bon-Cheol Ku and acknowledged that going instrument as his/her free act and deed this day, 20
(SEAL)	Notary Public
	My Commission expires/

•

	Jayant Kumar
State/Commonwealth	1
of	
Then personally appe he/she executed the fo	eared before me the above-named Jayant Kumar and acknowledged that oregoing instrument as his/her free act and deed this day 20
(SEAL)	Notary Public
	(print name)
	My Commission expires//
Inventor's Signature:	海鱼
State/Commonwealth	Bon-Cheol Ku
State/Commonwealth	
of <u>MASS TRAA</u>	•
County of MiDL	UCK S M/O
	ared before me the above-named Bon-Cheol Ku and acknowledged that pregoing instrument as his/her free act and deed this, 20 day

Inventor's Signature:	Sv-My	long	lee
		Soo-Hyou	ng Lee
State/Commonwealth			
of Massachusett	2		
County of Suffoll	<u> </u>		
	d before me the above-nan foregoing instrument as him.		young Lee and acknowledged act and deed this
(SEAL)	Catherine mater mck	mayh	Notary Public
	CATHERINE MATON-	MEDENIOUS	(print name)
	My Commission expir	res <u>03</u>	108 12007

<u>ASSIGNMENT</u>

WHEREAS, we, Sukant Tripathy, Sucharita Roy, Ramaswamy Nagarajan, Jayant Kumar, Bon-Cheol Ku and Soo-Hyoung Lee, along with Lynne A. Samuelson and Ferdinando F. Bruno, have invented a certain improvement in POLYMERIZATION OF AROMATIC MONOMERS USING DERIVATIVES OF HEMATIN, described in an application for Letters Patent of the United States, the specification of which:

[]	is being executed on even date herewith and is about to be filed in the United States Patent Office;
[X]	was filed on November 27, 2001 as Application No. 09/994,998;
[]	was patented under U.S. Patent No. [] on [].

WHEREAS, University of Massachusetts Lowell (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having a usual place of business at One University Avenue, Lowell, MA 01854 desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America. its territories and all foreign countries, in and to said invention as described in said application. together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature:	Susan Tripath	athy (Deceased)
State/Commonwealth of		of the Estate of Sukant Tripathy Frafrix 7-18-0
County of Mi	dollesex	
Then personally appear he/she executed the form of	egoing instrument as his/her free ac	an Tripathy and acknowledged that t and deed this day
(SEAL)		Notary Public
•	My Commission expires 10	

Inventor's Signature: Sucharita Pari
i Sucharita Roy
State/Commonwealth
of
County of Middlesex
Then personally appeared before me the above-named Sucharita Roy and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this day of, 2002
(SEAL) July Notary Public
Lila A. Lorrey (print name)
My Commission expires 06 / 07 / 2007.
Inventor's Signature:
Ramaswamy Nagarajan State/Commonwealth
of <u>Massachusetts</u>
County of Middlesex
Then personally appeared before me the above-named Ramaswamy Nagarajan and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this day of <u>June</u> , 20 02.
(SEAL) Sila G. Souly Notary Public
Lila A. Lorrey (print name)
My Commission expires 06 / 07 / 2007.

Inventor's Signature:	A 1	
-	Jayant Kumar	
State/Commonwealth		
of Massachusetts	·	
County of Middlesex		
Then personally appeared before me the above-named Jayant Kumar and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this _second day of		
	/Lila A. Lorrey / (print name)	
	My Commission expires 06 / 07 / 2007.	
Inventor's Signature:		
Inventor's Signature:	Bon-Cheol Ku	
Inventor's Signature: State/Commonwealth	Bon-Cheol Ku	
State/Commonwealth		
State/Commonwealth		
State/Commonwealth of County of Then personally appeared b	efore me the above-named Bon-Cheol Ku and acknowledged that ng instrument as his/her free act and deed this day	
State/Commonwealth of County of Then personally appeared b he/she executed the foregoin of	efore me the above-named Bon-Cheol Ku and acknowledged that ng instrument as his/her free act and deed this day, 20	
State/Commonwealth of County of Then personally appeared b he/she executed the foregoin of	efore me the above-named Bon-Cheol Ku and acknowledged that ng instrument as his/her free act and deed this day, 20	

Inventor's Signature:	
State/Commonwealth	Jayant Kumar
of	· · · · · · · · · · · · · · · · · · ·
County of	
	before me the above-named Jayant Kumar and acknowledged that bing instrument as his/her free act and deed this day
(SEAL)	Notary Public
	(print name)
	My Commission expires/
Inventor's Signature:	ig 2
State/Commonwealth	Bon-Cheol Ku
of MASSACHUS	atte
County of MODDLA	
Then personally appeared he/she executed the forego of	before me the above-named Bon-Cheol Ku and acknowledged that bing instrument as his/her free act and deed this

Inventor's Signature:	Sov-Hyoung Lee
	Soo-Hyoung Lee
State/Commonwealth	·
of Massachusetts	
County of Suffolk	
that he/she executed the foreg day of 5/13 (SEAL)	THE RIME MATON-NC DONOLGY (print name) My Commission expires 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1

LEGAL;# 3/ 4

MILTON, BROOK, SMITH & REYNOLDS, P.C.

AU6 0 5 2002

POWER OF ATTORNEY OR AUTHORIZATION OF AGENT AND **CORRESPONDENCE ADDRESS**

Application Number	09/994,998
Filing Date	November 27, 2001
First Named Inventor	Sukant Tripathy
Group Art Unit	1614
Examiner Name	not assigned
Attorney Docket Number	2328.2003-001

Title

POLYMERIZATION OF AROMATIC MONOMERS USING DERIVATIVES OF HEMATIN

I/V	I/We hereby appoint		
[X	[X] the attorneys/agents associated with Customer No. 021005		
[] Practitioner(s) named below:		
as Sti	my/our attorneys/agents to prosecute the application identified above, and to transact all business in the United ates Patent and Trademark Office connected therewith.		
Th	ne correspondence address for the above-identified application is:		
[X	Customer Number 021005		
	Hamilton, Brook, Smith & Reynolds, P.C.		
	530 Virginia Road		
	P.O. Box 9133		
	Concord, Massachusetts 01742-9133		
[] Other		
	ease direct all telephone calls and facsimiles to:		
Na	me N. Scott Pierce Tel. No. 978-341-0036 Fax No. 978-341-0136		
10	am the:		
L	[] Applicant/Inventor.		
[[] Authorized representative of the Assignee of the entire interest. See 37 C.F.R. 3.71. A Statement under 37 C.F.R. §3.73(b) is enclosed.		
ĮΧ	[X] Authorized representative of an assignee together with University of Massachusetts Lowell of the entire interest. A separate Statement under 37 C.F.R. § 3.73(b) is enclosed.		
SIGNATURE of Applicant or Assignee of Record			
Na	Wincent J. Ranucci, Esq.		
Si	gnature / Me out / Ranuci		
Da	ate (ULV 25, 2002		
1	X] Total of [2] forms are submitted.		

LEGAL;# 4/ 4

Docket No. 2328.2003-001

STATEMENT UNDER 37 C.F.R. § 3.73(b)

Applica	ints: <u>Suk</u>	rant Tripathy (Deceased), Lynne A. Samuelson, Ferdinando Bruno, Sucharita Roy, R	amaswamy Nagarajan, Jayani
		eol Ku, and Soo-Hyoung Lee	
		: <u>09/994,998</u> Filed: <u>November 27, 2001</u>	
For:	POLY	MERIZATION OF AROMATIC MONOMERS USING DERIVATIVES OF HEMA	TIN
Govern	ment of t	the United States, as represented by the Secretary of the Army, a Government ager (Name of Assignee). (Type of Assignee, e.g., corporation, partnership,	miversity, government agency, etc.)
states th	nat it is		
A.	[]	the assignce of the entire right, title and interest in the patent application identified	above; or
B.	[X] an assignce together with University of Massachusetts Lowell of the entire right, title and interest in the patent application identified above. A separate Statement under 37 CFR § 3.73(b) is being submitted.		
The rig	ht, title a	nd interest of the above-named assignee in the patent application identified above is	established by virtue of:
A. [X]	An assi and Tra	ignment from the inventor(s) of the patent application identified above. The assignment of the inventor of the patent application identified above. The assignment of the patent application identified above. The assignment of the patent application identified above. The assignment of the patent application identified above.	unt was recorded in the Patent f is attached.
OR			
В.[]	A chair	of title from the inventor(s) of the patent application identified above, to the current	t assignee as shown below:
,	1.	From:To:	
	1.	The document was recorded in the Patent and Trademark Office at	
		Reel, Frame, or a copy thereof is attached.	
	2.	From:To:To:To:To:To:	
•		THE HOCDINETT WAS ICCORDED IN THE TRACE TRACE TO COMMENT OF THE ME	
		Reel, Frame, or a copy thereof is attached.	,
	3.	From:To:	
		The document was recorded in the Patent and Trademark Office at Reel, or a copy thereof is attached.	
	[] A	dditional documents in the chain of title are listed on a supplemental sheet.	
The un	dersigne	d (whose title is supplied below) is authorized to act on behalf of the assignee.	
Date:_	10	Ly 25, 2002	
Name:		Vincent J. Ranucci, Esq.	
Title:_	PA	TENT ATTORNEY	
Signat	, //	/www.t I Carrison	



WHEREAS, I, Lynne A. Samuelson and Ferdinando F. Bruno, along with Sukant Tripathy, Sucharita Roy, Ramaswamy Nagarajan, Jayant Kumar, Bon-Cheol Ku and Soo-Hyoung Lee, have invented a certain improvement in POLYMERIZATION OF AROMATIC MONOMERS USING DERIVATIVES OF HEMATIN, described in an application for Letters Patent of the United States, the specification of which:

[]	is being executed on even date herewith and is about to be filed in the United States Patent Office;
[X]	was filed on November 27, 2001 as Application No. 09/994,998;
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AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

	•
	Inventor June A. Samuelson Date May 9, 2007
	Address 21 McDonough Drive, Marlborough MA 01752
Witness .	COMMONWEALTH OF MASSACHUSETTS COUNTY OF MIDDLESEX ON THIS 9TH DAY OF MAY, 2002, LYNNE A SAMUELSON PERSONALLY APPEARED BEFORE ME, WHOSE IDENTITY I PROVED ON THE BASIS OF HER MASSACHUSETTS.
Witness . Address .	DRIVERS LIC. TO BE THE SIGNER OF THE ATBOVE DOCUMENT AND SHE ACKNOWLEDGED THAT SHE SIGNED IT WILLINGLY BRIANT WEBET Notary Public Commonwealth of Massashusetts My Commission Expires May 19, 2006

Inventor's Signature:
State/Commonwealth
of Massachusetts
County of Middlesex
Then personally appeared before me the above-named Ferdinando F. Bruno and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this, 20_02
(SEAL) Notary Public
LERESA CROUSE (print name)
My Commission expires <u>し</u> タノコスノンム

@PFDesktop\::ODMA/MHODMA/iManage;285066;1

IERESA CROUSE
Notary Public
Commonwealth of Massachusetts
My Commission Expires
September 22, 2006

WHEREAS, we, Sukant Tripathy, Sucharita Roy, Ramaswamy Nagarajan, Jayant Kumar, Bon-Cheol Ku and Soo-Hyoung Lee, along with Lynne A. Samuelson and Ferdinando F. Bruno, have invented a certain improvement in POLYMERIZATION OF AROMATIC MONOMERS USING DERIVATIVES OF HEMATIN, described in an application for Letters Patent of the United States, the specification of which:

[]	is being executed on even date herewith and is about to be filed in the United States Patent Office;
[X]	was filed on November 27, 2001 as Application No. 09/994,998;
[]	was patented under U.S. Patent No. [] on [].

WHEREAS, University of Massachusetts Lowell (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having a usual place of business at One University Avenue, Lowell, MA 01854 desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, inc luding the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature:		ripathy (Deceased)
State/Commonwealth		îstratrî X
of MA		
County of Middl	esex	
Then personally appeared b he/she executed the foregoi of 3uy		Susan Tripathy and acknowledged that e act and deed this day
(SEAL)	polles	Notary Public
-	Monisto Fial	Cope (print name)
	My Commission expires	10/31/08

5T 2-18-02

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Inventor's Signature:	
State/Commonwealth Sucharita Roy	
of Massachusetts	
County of Middlesex	
Then personally appeared before me the above-named Sucharita Roy and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this19th day of, 20_02 (SEAL) Lila A. Lorrey	
Inventor's Signature:	_
Ramaswamý Nagarajan State/Commonwealth	
of Massachusetts	
County of Middlesex	
Then personally appeared before me the above-named Ramaswamy Nagarajan and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this	
(SEAL) Notary Public	
My Commission expires <u>06 / 07 / 2007</u> .	

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Inventor's Signature:	Jkuman
State/Commonwealth	Jayant Kumar
of Massachusetts	y S
County of Middlesex	· · · · · · · · · · · · · · · · · · ·
Then personally appeare he/she executed the fore of July (SEAL)	d before me the above-named Jayant Kumar and acknowled ged that going instrument as his/her free act and deed this second day 2002 Lila A. Lorrey (print name) My Commission expires 06 / 07 / 2007.
Inventor's Signature:	
mvontoi s Bigilataro.	Bon-Cheol Ku
State/Commonwealth	
of	
County of	
Then personally appeared he/she executed the foregof	d before me the above-named Bon-Cheol Ku and acknowledged that going instrument as his/her free act and deed this day, 20
he/she executed the foreg	going instrument as his/her free act and deed this day
he/she executed the foreg	going instrument as his/her free act and deed this day, 20 Notary Public
he/she executed the foreg	going instrument as his/her free act and deed this day, 20

	Jayant Kumar
State/Commonwealth	
County of	
	ared before me the above-named Jayant Kumar and acknowledged that aregoing instrument as his/her free act and deed this day 20
(SEAL)	Notary Public
	(print name)
	My Commission expires//
	:tw
inventor's Signature:	海足
	Bon-Cheol Ku
State/Commonwealth	·
State/Commonwealth of MSS 1814	us ATIC
Inventor's Signature: State/Commonwealth ofMSSIEM County ofMiDL	us ATIC

Inventor's Signature:	Sov -101	youf	lee
State/Commonwealth of Massachuset County of Suffol	to	Soo-Hyoui	ng Lee
Then personally appear that he/she executed the day of May 13	ed before me the above-nate foregoing instrument as h	med Soo-H y ais/her free a	young Lee and acknowledged ct and deed this
(SEAL)	Catherine mater mil	mayh	Notary Public
	CATHERINE MATON- My Commission exp		(print name) (<u>08 / 200</u> -)
	•		

<u>ASSIGNMENT</u>

WHEREAS, we, Sukant Tripathy, Sucharita Roy, Ramaswamy Nagarajan, Jayant Kumar, Bon-Cheol Ku and Soo-Hyoung Lee, along with Lynne A. Samuelson and Ferdinando F. Bruno, have invented a certain improvement in POLYMERIZATION OF AROMATIC MONOMERS USING DERIVATIVES OF HEMATIN, described in an application for Letters Patent of the United States, the specification of which:

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[X]	was filed on November 27, 2001 as Application No. 09/994,998;
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NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: State/Commonwealth	Sukant Tripathy (Deceased) Susan Tripathy, as Executrical of the Estate of Sukant Tripathy Administrative 7-1	 8-02
of <u>MA</u>		
County of Midd	lesex	
	efore me the above-named Susan Tripathy and acknowledged thing instrument as his/her free act and deed this day, 2002.	at
(SEAL)	Rollie Notary Public	
•	Mail 8 ha kealhatre (print name)	
4	My Commission expires 10 /3/ 108	
		

Inventor's Signature:
Sucharita Roy
State/Commonwealth
of Massachusetts
County of Middlesex
Then personally appeared before me the above-named Sucharita Roy and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this day of, 2002
(SEAL) July Notary Public
Lila A. Lorrey (print name)
My Commission expires 06 / 07 / 2007.
Inventor's Signature:
State/Commonwealth Ramaswamy Nagarajan
ofMassachusetts
County of <u>Middlesex</u>
Then personally appeared before me the above-named Ramaswamy Nagarajan and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this, 20_02
(SEAL) July Notary Public
My Commission expires 06 / 07 / 2007.

Inventor's Signature:	Skeeman
 -	Jayant Kumar
State/Commonwealth	
of Massachusetts	
County of Middlesex	
Then personally appeared he/she executed the foregoof July (SEAL)	before me the above-named Jayant Kumar and acknowledged that bing instrument as his/her free act and deed this second day 2002. Colland Notary Public
Inventor's Signature:	
State/Commonwealth	Bon-Cheol Ku
of	
County of	
County of	·
Then personally appeared I he/she executed the forego of	before me the above-named Bon-Cheol Ku and acknowledged that ing instrument as his/her free act and deed this day, 20
(SEAL)	Notory Public
	Notary Public
	(print name)
	My Commission expires//

Inventor's Signature:	Jayant Kumar
State/Commonwealth	
of	
County of	
Then personally appeared he/she executed the foreg of	before me the above-named Jayant Kumar and acknowledged going instrument as his/her free act and deed this d
(SEAL)	Notary Public
	(print name)
	My Commission expires/
Inventor's Signature:	in 2
	Bon-Cheol Ku
State/Commonwealth	
	SATIS
State/Commonwealth of MASSACHUS County of MODDL	nsap

Inventor's Signature:	Sov-Hyoup Lee
	Soo-Hyoung Lee
State/Commonwealth	, -
of Massachusetts	
County of Suffolk	·
Then personally appeared before me the above-named Soo-Hyoung Lee and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this day of 5/13, 20_02	
(SEAL)	Whene Mater Michael Notary Public
	THE RIME MATON-MCDONOUGH (print name) My Commission expires 03/08/2007